REMARKS

Claims 1 to 125 are in the application. Favorable review and early passage to issue are respectfully requested.

The specification has been amended in accordance with 37 C.F.R. § 1.78 to reflect that the present application is a divisional of parent application 09/580,410.

Applicants' undersigned attorney may be reached in our Costa Mesa, California office at (714) 540-8700. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

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APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE TO SPECIFICATION

In the first aspect of the present invention, there is provided an ink tank capable of introducing ink into the ink tank through an inlet by a negative pressure introduced into the ink tank through a suction port, comprising[:]

gas-liquid separating means which is provided at the suction port and which permits gas to pass but inhibits ink from passing.

In the second aspect of the present invention, there is provided an ink-jet cartridge comprising[:]

an ink tank [as claimed in Claim 1;] <u>according to the first aspect,</u> and

an ink-jet printing head which is able to eject ink introduced from the ink tank.

In the third aspect of the present invention, there is provided an ink-supplying device for supplying ink to an ink tank [as claimed in claim 1] <u>according to the first aspect</u> or an ink tank of an ink- jet cartridge [as claimed in Claim 30] <u>according to the second aspect</u>, comprising[:]

ink-supplying means for supplying ink stored in a main ink tank into the ink tank through the inlet[;], and

negative-pressure loading means for loading negative pressure caused by a suction pump into the ink tank through the suction port.

In the fourth aspect of the present invention, there is provided an ink-supplying device for supplying ink to an ink tank [as claimed in claim 1] according to the first aspect or an ink tank of an ink-jet cartridge [as claimed in Claim 30] according to the second aspect, comprising[:]

ink-supplying means for supplying ink stored in a main ink tank into the ink tank through the inlet[;],

negative-pressure loading means for loading negative pressure caused by a suction pump into the ink tank through the suction port[;], and

capping means capable of capping an ink eject port of the printing head by a cap member.

In the fifth aspect of the present invention, there is provided an ink-jet printing apparatus, comprising[:]

a mounting portion on which an ink tank [as claimed in Claim 1] according to the first aspect and an ink-jet printing head are mountable, where the ink-jet printing is able to eject ink supplied from the ink tank[;], and

transfer means which performs the relative movements of the ink-jet printing head and a printing medium.

In the sixth aspect of the present invention, there is provided an ink-jet printing apparatus, comprising[:]

a mounting portion on which an ink-jet cartridge [as claimed in Claim 30]

according to the second aspect is mountable,[;] and

transfer means for relatively moving the ink-jet cartridge and a printing medium.

In the seventh aspect of the present invention, there is provided a method for supplying ink to an ink tank [as claimed in Claim 1] according to the first asepct and an ink tank of an ink cartridge [as claimed in Claim 30] according to the second aspect, comprising the steps of[:]

supplying ink into the ink tank from the inlet by loading negative pressure into the ink tank from the suction port through the gas-liquid separating means[;], and

stopping the load of negative pressure into the ink tank from the suction port.

In the eighth aspect of the present invention, there is provided an ink-jet printing apparatus, comprising[:]

a mounting portion on which an ink tank [as claimed in Claim 1] according to the first aspect and an ink-jet printing head are mountable, where the ink-jet printing is able to eject ink supplied from the ink tank[;],

transfer means which performs the relative movements of the ink-jet printing head and a printing medium[;], and

means for forming ink meniscus on the ink eject port by the recovery process which discharges ink from the ink eject port of the ink-jet printing head under suction before supplying of ink to the ink tank.

In the ninth aspect of the present invention, there is provided an ink-jet printing

apparatus for printing an image on a printing medium employing an ink-jet printing head capable of ejecting ink supplied from an ink tank, comprising[:]

negative-pressure loading means which is able to introduce negative pressure into the ink tank[;],

ink-supplying means for supplying ink into the ink tank using the negative pressure in the ink tank[;],

gas-liquid separating means which lies in a negative-pressure loading passage between the ink tank and the negative-pressure loading means and which permits gas to pass but inhibits ink from passing[;], and

disrupting means capable of disrupting a midcourse portion of the negative-pressure loading passage between the ink tank and the gas-liquid separating means.

In the tenth aspect of the present invention, there is provided an ink-supplying device, comprising[:]

negative-pressure loading means which is able to introduce negative pressure into an ink tank[;],

ink-supplying means for supplying ink into the ink tank using the negative pressure in the ink tank[;],

gas-liquid separating means which lies in a negative-pressure loading passage between the ink tank and the negative-pressure loading means and which permits gas to pass but inhibits ink from passing[;], and

disrupting means capable of disrupting a midcourse portion of the negative-pressure loading passage between the ink tank and the gas-liquid separating means.

In the eleventh aspect of the present invention, there is provided a method for supplying ink to an ink tank, comprising[:]

gas-liquid separating means which lies in a negative-pressure loading passage between the ink tank and the negative-pressure loading means and which permits gas to pass but inhibits ink from passing[;], and

disrupting means for disrupting a midcourse portion of the negative-pressure loading passage between the ink tank and the gas-liquid separating means[;], the method comprising the steps of[:]

loading negative pressure into the ink tank through the negative-pressure loading passage[;],

supplying ink into the ink tank using negative pressure in the ink tank[;],

stopping the loading of negative pressure into the ink tank by the gas-liquid separating means when ink touches the gas-liquid separating means[;], and

disrupting the midcourse portion by the disrupting means except when ink is supplied into the ink tank.

In the twelfth aspect of the present invention, there is provided an ink tank which has an ink-supplying port for supplying ink into an ink-jet printing head, and which is capable of introducing ink into the ink tank by negative pressure introduced into the ink tank, comprising[:]

a valve provided at the ink-supplying port, which closes the ink-supplying port by negative pressure higher than a predetermined level in the ink tank.

In the thirteenth aspect of the present invention, there is provided an ink-jet printing head capable of ejecting ink supplied from an ink tank through an ink supplying port, comprising[:]

a valve provided at a connecting port connected to the ink-supplying port, which closes the ink-supplying port by negative pressure higher than a predetermined level in the ink tank.

In the fourteenth aspect of the present invention, there is provided an ink-jet cartridge comprising:

an ink tank [as claimed in Claim 86;] according to the twelfth aspect, and

an ink-jet printing head capable of ejecting ink supplied from an ink tank through an ink-supplying port.

In the fifteenth aspect of the present invention, there is provided an ink-jet cartridge comprising:

an ink-jet printing head [as claimed in Claim 94;] according to the thirteenth aspect, and

an ink tank capable of supplying ink into the inkjet printing head through the connecting port.

In the sixteenth aspect of the present invention, there is provided an ink-jet

printing apparatus comprising[:]

a tank mounting portion on which an ink tank [as claimed in Claim 86] according to the twelfth aspect is mountable[;],

a head mounting portion on which an ink-jet printing head capable of ejecting ink supplied from the ink tank is mountable[;], and

moving means for relatively moving the ink-jet printing head and a printing medium.

In the seventeenth aspect of the present invention, there is provided an ink-jet printing apparatus comprising[:]

a head mounting portion on which an ink-jet printing head [as claimed in Claim 94] according to the thirteenth aspect is mountable[;],

a tank mounting portion on which an ink tank capable of supplying ink to the ink-jet printing head is mountable[;], and

moving means for relatively moving the ink-jet printing head and a printing medium.

In the eighteenth aspect of the present invention, there is provided an ink tank having a bag-like tank body which is made of a sheet of a thin film that is folded down in one side to form a folding part, and which is capable of storing ink, wherein

the folding part forms a connecting portion capable of connecting between the inside and the outside of the tank body by means of a hollow conduit that is able to penetrate the

folding part.

In the nineteenth aspect of the present invention, there is provided a printing apparatus capable of printing of an image using ink in the tank body, comprising[:]

a tank mounting portion on which an ink tank [as claimed in Claim 112] according to the eighteenth aspect is mountable, wherein

a hollow conduit that is able to penetrate the connecting portion of the tank body and is provided at the tank mounting portion.

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